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ABSTRACT

This resource guides assists vocational education teachers of special needs students in locating software that teaches mathematics skills in a vocational context. An introduction explains how the guide was developed and how to use it. The guide is organized by specific math skills: readiness; whole numbers; fractions; decimals; discount, interest, and percentage; and measurement. For each skill, the following information is provided: one or more objectives, software program names listed by type of instructional approach (tutorial, drill and practice, educational games, and teacher tools), and publisher. The last page provides publishers' addresses and telephone numbers. (SK)

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A SAMPLING OF MICROCOMPUTER SOFTWARE THAT COULD BE USED IN TEACHING MISSOURI LINC MATH ACCESS SKILLS

ED321148

Vocational Math Software Committee
in Cooperation With
Missouri LINC and
The Missouri Technology Center for Special Education

CE 055 386

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Vocational Math Software Project

INTRODUCTION

Many vocational educators who work with special needs students have an interest in locating high-quality software that will assist their students in acquiring the skills necessary to be successful in the workplace. Indeed, microcomputers have considerable potential for assisting special needs students in learning these skills. Capturing this potential, however, requires the availability of appropriate software.

The information on the pages that follow is the result of the work of a committee jointly sponsored by Missouri LINC and the Missouri Technology Center for Special Education. During the committee's deliberations, it became apparent that three types of software were of interest to vocational special needs educators:

Type 1	Type 2	Type 3
Teaches Academic Skills	Teaches Academic Skills in a Vocational Context	Teaches Vocational Skills

The committee felt that programs which taught math skills in a vocational context (type 2) were more desirable than those that simply provided basic math instruction (type 1). However, we found that there was an insufficent amount of type 2 software to support the Math ACCESS Skills curriculum. Therefore, information on both types (1 and 2) are provided. The committee excluded type 3 software from consideration since its use would be more properly determined by individual vocational teachers.

The committee's task was twofold: (1) locate software which had the potential to support the teaching and learning of the Math Skills identified in the Missouri ACCESS Skills and, (2) assemble information about these programs in a format that teachers could easily use. This module represents the final outcome of the project.

HOW TO USE THIS RESOURCE GUIDE

This resource guide was developed to assist vocational special needs educators in identifying software which has the potential to assist students in acquiring the math skills as identified in the ACCESS Skills. On the pages that follow, objectives from the ACCESS Skills are outlined with software which would support these objectives.

The software has been identified and categorized by its instructional approach. The following explanation will assist in understanding the various instructional approaches in software:

Instructional Approaches in Software

Tutorial—introduces students to concepts and provides guided practice

Drill and Practice—provides repeated practice on given concepts

Educational Game—provides game environment to practice skills

Teacher Tools—programs that facilitate teacher management of instruction

The most obvious use of this resource guide is to allow a teacher to examine his or her existing software collection for programs they already own which can be used to support the teaching and learning of the ACCESS math objectives. By locating programs within the building, teachers will save considerable time and energy in implementing a microcomputer instructional program.

Vocational Math Software Project

A second use of this resource guide focuses on assisting teachers in acquiring new software that will support the teaching and learning of specific instructional objectives. Complete information about a program is available from the publisher (note the addresses at the end) and a brief description is available from the Technology Center.

Please note that inclusion of information about a program does not constitute an endorsement of the product. Further, we cannot recommend strongly enough that educators **personally preview each program, prior to purchasing**, to determine whether or not it will meet their needs and expectations. This point is particularly important in light of the troublesome problem of finding instructional materials that are age-appropriate and at the appropriate instructional level.

If you would like more information, contact:

Missouri LINC 800/392-0533 * Additional copies of this module	Missouri Technology Center for Special Education 800/872-7066 * Software searches

Committee Members:

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MATH SKILLS: READINESS

OBJECTIVE: Count two-place numbers

INSTRUCTIONAL APPROACH Program Name	Publisher
TUTORIAL	
Math Sequences-R: Number Readiness	Milliken Publishing
DRILL AND PRACTICE	
Arithmetic Critters	MECC
Counting	Micro-ED
Milt's Math Drills	Hartley Courseware
Number Farm	DLM Teaching Resources
The Money Series: Counting	Hartley Courseware

MATH SKILLS: WHOLE NUMBERS

OBJECTIVE: Add two-place numbers

OBJECTIVE: Subtract two-place numbers

OBJECTIVE: Multiply two-place numbers

OBJECTIVE: Divide two-place numbers

INSTRUCTIONAL APPROACH Program Name	Publisher
TUTORIAL	
Arithmetic Doctor: Whole Numbers	Educational Activities
Basic Math Competency Skill Building	Educational Activities
Beginning Math Series	Society for Visual Ed.
Elemen. Math Classroom Learning System: Whole	Collamore Ed.Publishers
Math Sequences-R: Addition	Milliken Publishing
Math Sequences-R: Division	Milliken Publishing
Math Sequences-R: Multiplication	Milliken Publishing
Math Sequences-R: Subtraction	Milliken Publishing
Math Talk	First Byte
Math Tutor: Addition	Scholastic
Math Tutor: Multiplication	Scholastic
Math Tutor: Subtraction	Scholastic
Math Tutor: Division	Scholastic
Mathsheet	Houghton Mifflin
Success with Math: 1-2-3 Digit Multiplication	Mindscape
Success With Math: Addition with Carry	Mindscape
Success With Math: Long Division	Mindscape
Success with Math: Subtraction	Mindscape
Understanding Math Series: Learning Division	Mindscape
Understanding Math Series: Learning Subtraction	Mindscape
Understanding Math Series: Learning Addition	Mindscape
Understanding Math Series: Learning Multiplication	Mindscape
Wordmath I and II	Milliken Publishing

Whole Numbers Continued on Next Page...

Vocational Math Software Project

Whole Numbers Continued

INSTRUCTIONAL APPROACH Program Name	Publisher
DRILL AND PRACTICE	
Addition Logician	MECC
Addition Magician	Learning Co.
Arcademic Skill Builders	DLM Teaching Resources
Arithmetic Critters	MECC
Conquering Whole Numbers	MECC
DLM Math Fluency Program	DLM Teaching Resources
Fast Facts	Edu-Soft
Lifeskill Mathematics Series	Computer Skill Builders
Math Blaster Plus	Scholastic
Math for Successful Living Series	Career Aids
Math Masters: Addition and Subtraction	DLM Teaching Resources
Math Masters: Multiplication & Division	DLM Teaching Resources
Math On The Job	Career Aids
Math Shop	Scholastic
Mathematics Activities Courseware	Houghton Mifflin
Sailing Through Story Problems	DLM Teaching Resources
EDUCATIONAL GAME	
Challenge Math	Sunburst
Guesstimation	EMC Publishing
Gulp!	Milliken Publishing
Math Blaster!	Davidson & Associates
Puzzle Tanks	Sunburst
Salina Math Games	Educational Activities
Speedway Math	MECC
The Royal Rules	Sunburst
What's It Corporation	Sunburst
TEACHER TOOLS	
Computer Generated Math. Materials, Volume 2	MECC
Math Assistant I and II	Scholastic
Worksheet Wizard I: Whole Numbers	EduSoft

MATH SKILLS: FRACTIONS

OBJECTIVE: Add common fractions

OBJECTIVE: Subtract common fractions

OBJECTIVE: Multiply common fractions

OBJECTIVE: Divide common fractions

INSTRUCTIONAL APPROACH Program Name	Publisher
TUTORIAL	
Arithmetic Doctor: Fractions	Educational Activities
Fractions	Quality Educational Designs
Math Sequences-R: Fractions	Milliken Publishing
Math Tutor: Fractions I	Scholastic
Math Tutor: Fractions II	Scholastic
Mixed Number	Media Materials, Inc
Success with Math: Fractions Series	Mindscape
DRILL AND PRACTICE	
Conquering Fractions: Addition & Subtraction	MECC
Conquering Fractions: Multiplication & Division	MECC
Fraction Factory	Springboard Software
Fraction Practice Unlimited	MECC
Guesstimation	EMC Publishing
Lifeskill Mathematics Series	Computer Skill Builders
Math Shop	Scholastic
Partial Fractions	Sunburst
Prevocational Math-Factions	Shopware
Prevocational Math-Improper Fractions	Shopware
EDUCATIONAL GAME	
Fraction Concepts, Inc.	MECC
Fraction Munchers	MECC
Pizza Fractions	HRM Software
TEACHER TOOLS	
Worksheet Wizard II: Fractions	EduSoft

Vocational Math Software Project

MATH SKILLS: DECIMALS

OBJECTIVE: Add two-place decimals

OBJECTIVE: Subtract two-place decimals

OBJECTIVE: Multiply two-place decimals

OBJECTIVE: Divide two-place decimals

INSTRUCTIONAL APPROACH Program Name	Publisher
TUTORIAL	
Arithmetic Doctor: Decimals	Educational Activities
Math Sequences-R: Decimals	Milliken Publishing
Math Tutor: Decimals	Scholastic
Success with Math: Decimals Series	Mindscape
DRILL AND PRACTICE	
Automotive Technician Math. Vol.2	MECC
Conquering Decimals: Addition & Subtraction	MECC
Conquering Decimals: Multiplication & Division	MECC
Decimal Skills	Media Materials, Inc.
Lifeskill Mathematics Series	Computer Skill Builders
Math Shop	Scholastic
Math for Everyday Living	Educational Activities
Money Matters	MCE
Money! Money!	Hartley Courseware
Money Works	MECC
Prevocational Math-Decimals	Shopware
EDUCATIONAL GAME	
Challenge Math	Sunburst
Decimal Concepts	MECC
Get to the Point	Sunburst
Math Football Decimals	Gamco
Salina Math Games	Educational Activities, Inc.
The Magic Cash Register	Avant Garde Publishing
The Whatsit Corporation	Sunburst
TEACHER TOOLS	
Computer Generated Math. Materials, Volume 2	MECC
Worksheet Wizard III: Decimals	EduSoft

MATH SKILLS: DISCOUNT, INTEREST, PERCENTAGE

OBJECTIVE: Add discount, interest and percentage

OBJECTIVE: Subtract discount, interest and percentage

OBJECTIVE: Multiply discount, interest and percentage

OBJECTIVE: Divide discount, interest and percentage

INSTRUCTIONAL APPROACH Program Name	Publisher
TUTORIAL	
Math Sequences-R: Percents	Milliken Publishing
Math Tutor: Percents, Ratios, & Proportions	Scholastic
Percentages	Educational Activities, Inc.
DRILL AND PRACTICE	
Automotive Technician Math. Vol.2	MECC
Percent Fundamentals	Control Data Corporation
Space Journey	Scott Foresman
EDUCATIONAL GAME	
Survival Math: Simulations	Sunburst

MATH SKILLS: MEASURMENT

OBJECTIVE: Perform standard units of measurement (i.e., cup, pint, quart, inch)

OBJECTIVE: Use basic measuring instruments (i.e., rulers, scales)

OBJECTIVE: Add surface areas, values, weights and measures

OBJECTIVE: Subtract surface areas, values, weights and measures

OBJECTIVE: Multiply surface areas, values, weights and measures

OBJECTIVE: Divide surface areas, values, weights and measures

INSTRUCTIONAL APPROACH Program Name	Publisher
TUTORIAL	
Fish Scales	DLM Teaching Resources
Foods: Measuring Techniques	Orange Juice Software System
Math Sequences-R: Measurement Formulas	Milliken Publishing
Reading Micrometers	Career Aids
DRILL AND PRACTICE	
Arithmetic Critters	MECC
Estimation	Computer Skilll Builders
Exact Dimensions	Career Aids
Explorer Metros: A Metric Adventure	Sunburst
Math Shop	Scholastic
Metric and Problem Solving	MECC
Reading a Ruler - English Measurements	Shopware
Semcalc: The Word Problem Solver	Sunburst

PUBLISHERS

Avant Garde Publishing
37B Commercial Blvd.
Novato, CA 94947
800/847-6544 415/883-8083

Career Aids
20417 Nordhoff Street, Dept. V34
Chatsworth, CA 91311
818/341-2535

Collamore Educational Publishers
125 Spring Street
Lexington, MA 02173
800/428-8071 617/860-1454

Computer Skill Builders
P.O. Box 928
Alcoa, TN 37701
615/982-8594

Control Data Corporation
3111 Sibley Memorial Drive
Eagan, MN 55121
800/328-1109

Davidson & Associates
3135 Kashiwa Street
Torrance, CA 90505
800/392-2179

DLM Teaching Resources
One DLM Park
Allen, TX 75002
800/527-5030 800/442-4711

Educational Activities
P.O. Box 392
Freeport, NY 11520
800/645-3739

EduSoft
P.O.Box 2560
Berkeley, CA 94720
800/338-7638

EMC Publishing
300 York Avenue
St. Paul, MN 55101
800/ 328-1452

First Byte
2845 Temple Ave.
Long Beach, CA 90806
213/595-7006

Gamco
Box 1911
Big Spring, TX 79720
800/351-1404

Hartley
123 Bridge
Dimondale, MI 48821
517/646-6458

Houghton Mifflin
P.O. Box 683
Hanover, NH 03755
603/448-3838

HRM Software
175 Tompkins Avenue
Pleasantville, NY 10570
800/431-2050 914/769-7496

Learning Co.
545 Middlefield Road, Suite 170
Menlo Park, TX 75244
800/238-4277

Magna Systems Inc.
West County Line 95
Barrington, IL 60010
312/382-6477

MCE
157 So. Kalamazoo Hall Ste 250
Kalamazoo, MI 49007
800/421-4157

MECC
3490 Lexington Avenue N.
St. Paul, MN 55126
612/481-3500

Media Materials, Inc.
2936 Remington Avenue
Baltimore, MD 21211
800/638-1010

Micro-ED
P.O. Box 444005
Eden Prairie, MN 55344
800/MIC-ROED 612/944-8750

Milliken Publishing
P.O. Box 21579
St. Louis, MO 63132
314/991-4220

Mindscape
3444 Dundee Road
Northbrook, IL 60062
312/480-7667

Orange Juice Software System
338 South Arch Avenue
New Richmond, WI 54017
715/246-3588

Quality Educational Designs
P.O. Box 12486
Portland, OR 97212
800/622-6284 503/287-8137

Scholastic
P.O. Box 7502, 2931 E. McCarty St.
Jefferson City, MO 65102
800/541-5513

Scott Foresman
1900 East Lake Avenue
Glenview , IL 60025
312/ 729-3000

Shopware
Route 1, Box 330-E
Aberdeen, WA 98520
206/532-3392

Society for Visual Education
1345 Diversey Parkway
Chicago, IL 60614
800/621-1900 312/525-1500

Springboard Software
7807 Creekridge Circle
Minneapolis, MN 55435
800/328-1223

Sunburst Communications
39 Washington Ave. - Room EA
Pleasantville, NY 10570
800/ 431-1934 914/ 769-5030